

Amendments to the Specification:

Please amend the following paragraph (page 4, line 5-17) of the disclosure to include the following changes.

The present invention overcomes the problems of the prior art to provide a carbone-fueled fuel cell utilizing a membrane that separates the anode and the cathode and an electrolyte that holds water as a compound or in a coordinated state. The carbon fuel is typically an activated carbon and preferably is a carbon recovered from organic waste. An anode in the fuel cells may be catalytically-enhanced carbon, nickel metals and graphites while cathodes may be stainless steel, catalytic carbons, porous nickels, oxygen-reacting cathodes, and graphites. A membrane used in these fuel cells should be a proton permeable membrane such as a ceramic cloth or a ~~Nafion™~~ NAFION™ membrane. An electrolyte in these fuel cells may be an alkaline hydroxide or a hydrated alkaline earth chloride such as sodium hydroxide, potassium hydroxide, hydrated magnesium chlorides, hydrated calcium chlorides, hydrated strontium chlorides, magnesium hydroxides, magnesium oxides, iron carbonates, manganese carbonates, cerium carbonates and mixtures of these chemicals.

Please amend the following paragraph (page 9, line 3-13) of the disclosure to include the following changes.

In one embodiment, the reaction with carbon dioxide is accomplished by coupling the fuel cell to a regeneration cell. The regeneration cell has as its electrolyte an alkali chloride. These chlorides do not retain water, as do the hydroxides, so that cell operation at atmospheric pressure is limited to about 106°C. While the carbon-water reaction kinetics are not favorable at this temperature, the reactions are augmented by the transitory formation of oxychlorides which enhance the rate of the reaction. The anodes in this regeneration cell can be catalyzed carbon, or DSA™ Coated Titanium. The cathodes may be the standard cathodes of the type used in

commercial caustic-chlorine cells. The regeneration cells preferably use the ~~Nafion™~~ NAFION™ membranes to separate the chloride salt anolyte from the hydroxide catholyte. The reactions occurring in the regeneration cells utilizing sodium or potassium hydroxide, respectively, can be summarized as:

Please amend the following paragraph (page 11, line 7-18) of the disclosure to include the following changes.

In each of these cells, the anode and the cathode are separated by a membrane that allows the passage of hydrogen ions from the anode to the cathode without passing the electrons that were removed from those atoms. This is generally referred to as a proton-permeable membrane. Such membranes are available commercially, and ~~Nafion™~~ NAFION™ membranes (a solid polymer similar to ~~Teflon™~~ TEFLON™ made by DuPont) are examples of commercially available proton-permeable membranes that are well suited for use in the fuel cells of some embodiments of the invention. Alternatively, in one embodiment, the water-carrying ability of the alkaline chlorides is used without the expensive proton exchange membrane by using a ceramic cloth separator and nickel foam electrodes as described by Cherepy et al. (*Journal of the Electrochemical Society*, 152(1):A80 January, 2005). In this embodiment, a practical carbon-fueled fuel cell can be operated at temperatures of about 200°C or less.